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ABSTRACT

A recommendation is made for a six-year program of initial teacher preparation--five years of campus-based, but field-oriented, preparation followed by a sixth year of supervised internship with provision for follow-up of beginning teachers in their first year of regular employment. The following aspects of this topic are discussed: (1) needs and present program inadequacies; (2) the knowledge base supporting extended programs; (3) curricular components of initial teacher preparation programs; and (4) issues relating to extending initial teacher preparation. (JD)

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THE CASE FOR EXTENDED PROGRAMS OF INITIAL TEACHER PREPARATION

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CONTENTS

FOREWORD v

INTRODUCTION 1

NEEDS AND PRESENT PROGRAM INADEQUACIES 3
Present Inadequacies 3
A Personal Rather Than Professional Base 4
Minimal Professional Requirements 5
Societal Demands: Public Law 94-142 6
Views Supporting Extended Preparation 7
Our Recommendation 8

THE KNOWLEDGE BASE SUPPORTING EXTENDED PROGRAMS 9
Knowledge and the Professions 9
A Dimension of Professional Knowledge 10
Other Influences on Learning 11
Research on Teacher Effectiveness 11
Limitations of Research 15
Needed: A Broad Range of Teaching Skills 15
In Summary 16

CURRICULAR COMPONENTS OF INITIAL TEACHER PREPARATION PROGRAMS 17
Generic Teaching Domains 17
Common Skill Domains from the Helping Professions 17
Competency Clusters 17
A Proposed Framework for the Generic Component 19
Logical Operations in Teaching 20
Importance of Generic Approaches 20
Specific Pedagogical Learnings 21
An Example: English/Language Arts Education 21
An Example: Early Childhood Education 22
A Departure from the Usual Categories 22
General Education 23
Preprofessional Education 23
Academic Specialization 24
Field-Oriented Activities and Induction into the Profession 25
Microteaching, Simulation, and Protocol Materials 25
Beginning Teacher Needs 27
Follow-up of Recent Graduates 28
Relationships with Inservice Education and Continuing Professional Development 29
Issues Arising from Confusion of Functions 29
A Complex Task 30
Other Elements Influencing the Quality of Teacher Preparation 30

ISSUES RELATING TO EXTENDING INITIAL TEACHER PREPARATION 31

CONCLUSION 33

BIBLIOGRAPHY 35

FOREWORD

One of the distinguishing characteristics of a profession is its knowledge base that supports preparation programs and provides a basis for practice. Whether or not teaching has matured into full professional status is debated, but there is consensus among educators that the knowledge base about teaching and learning has expanded considerably during the past decade.

This expanded knowledge base consists of what educators individually and collectively know about teaching and learning; the findings of research, which during the past decade emphasized problems encountered by teachers; the results of experimental teacher preparation programs; and the theoretical deliberations of education scholars. On the premise of an expanded supporting knowledge base, the authors build a case for extending four-year programs of initial teacher preparation.

Other considerations, as well, are relevant to thinking about the need for extending preservice teacher education programs. College and university policies limit the amount of professional education that can be included in a four-year degree program, and state certification requirements tend to support these limitations. Although putting theory into practice is as significant to education as it is to law or medicine, the typical teacher education program is allowed insufficient time for adequate attention to the transition from preparation to practice. In addition, professors who assume responsibility for a field experience part of a teacher preparation program tend to be relegated to a status inferior to other positions in the college or university.

These and other limitations are only part of the problem. Societal expectations for education continue to increase through local, state, and federal laws and regulations, including Public Law 94-142, integration, career education, accountability, due process, energy conservation, pollution control, drug and alcohol education. These expectations and more must be translated and incorporated into teacher education programs that now do not have enough time for adequate professional preparation. While demands for expanding the content of preparation programs continue, the time limitations have remained constant.

Should initial teacher preparation programs be extended beyond four years to remedy present inadequacies? The question itself is controversial within the profession. For instance, four-year colleges, in particular, believe that they would have difficulty implementing extended preservice programs, so logically they tend to oppose this change. However, the central issue is not which college or university can or should be engaged in teacher education; rather it is what constitutes an effective preparation program for tomorrow's teachers of children and youth.

The ERIC Clearinghouse on Teacher Education is pleased to make this manuscript available to the teacher education community as a general statement to stimulate dialogue and offer guidance on this important subject. The Clearinghouse wishes to acknowledge that the authors first presented this paper to the Forum of Education Organization Leaders on September 7, 1979, in Arlington, Virginia. When the Forum was contacted for permission to publish the manuscript, it was learned from Dr. John Gardner, U.S. Office of Education, that no formal permission was needed as the document is in the public domain. For that reason, no part of this document can be reprinted for sale at profit. However, this publication will be indexed in Resources

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—KARL MASSANARI
Director, ERIC Clearinghouse
on Teacher Education

INTRODUCTION

> There is no threat to our existence greater than a threat to the process of education. If it were radically interrupted for a generation, we would die as surely as, and more quickly than, we would from gross genetic damage. Far more likely, and not so easily diagnosed, would be an uneven attrition of education by which culture would reproduce itself on a gradually declining scale.

That assessment from philosopher of science David Hawkins (1976, pp. 191-92) underscores the vital importance of education to mankind and to our cultural well-being. His sobering view parallels an assertion from American Association of Colleges for Teacher Education's Commission on Education for the Profession of Teaching (CEPT) about the teacher's impact on the individual:

> Every moment in the lives of teachers and pupils brings critical decisions of motivation, reinforcement, reward, ego enhancement, and goal direction. Proper professional decisions enhance learning and life; improper decisions send the learner toward incremental death in openness to experience and in ability to learn and contribute. (Howsam et al., 1976, p. 15)

The case for extended programs of initial teacher preparation takes root in these assertions. The importance of education to societal and individual well-being demands that teaching, which many view as a profession in terms of its social significance, become a profession in reality. We believe that a critical element in establishing professional status for teaching is an adequate knowledge base which, when transmitted to the practitioner, elevates the level of practice from the personal to the professional and guarantees a level of safe professional practice.

As the training arm of the teaching profession, teacher education has responsibility for leadership in building the professional knowledge base and for using that knowledge as a foundation for programs of teacher preparation. Without an adequate knowledge base for teaching or without adequate resources to use that knowledge base effectively in the initial preparation of teachers, teacher educators cannot assure that their graduates will attain a level of safe practice consistent with the expectations society has for its schools.

Teacher education has a substantial and growing knowledge base to support a professional level of initial teacher preparation. However, a major obstacle to the preparation of teachers at a level appropriate to a beginning professional is inadequate "life space" (time, facilities, personnel, instructional and research materials, or other significant program resources). This insufficiency of time and other resources has contributed to public criticism of our schools and to the diverting of inservice education from its principal functions to the task of correcting serious deficiencies in the initial preparation of teachers.

This paper will examine the case for extended programs of initial teacher preparation. Its major emphasis is on the knowledge base supporting teacher education, as derived from research, professional wisdom, and logical analysis. The discussion primarily addresses programmatic or curricular implications for teacher education, although we recognize the significance of other factors such as selection and admission procedures, student performance standards,

faculty qualifications, and the reward system of higher education. The paper concludes with a listing of several issues that still need to be resolved.

NEEDS AND PRESENT PROGRAM INADEQUACIES

Teachers do not now receive a fully professional preservice education. Their preparation is not comparable in length or rigor to that of most recognized professions, nor even that of other semiprofessions, if we consider the time allotted to strictly professional studies. More important, their education is not grounded in the basic concept that marks a truly professional education: that the graduate must have attained a level of competence sufficient to guarantee safe practice with clients.

The concept of the minimum safety level for professional practice is more than a commendable sentiment. If teacher educators were able to adhere to it, we would begin all considerations of initial teacher preparation by asking, "What should beginning teachers know and at what level of proficiency?" and determine the content and length of programs accordingly. Instead, we now begin with a given length and select content accordingly.

Present Inadequacies

Preservice teacher education aims somewhere near a level of competence sufficient for the new teachers' survival in the classroom with the least possible harm to students. When we speak of deficiencies in the preservice education of teachers, we are not making a statement about teachers, but about the failure of teacher education institutions to serve teachers adequately. The dramatic, violent failures that cause beginning teachers to resign in mid-year are dehumanizing not only to students, but also to young teachers who want to succeed--who try, but simply cannot determine how to succeed fast enough.

An even worse, but not nearly so visible, outcome is the ill-prepared beginning teacher who learns to survive in the classroom through inferior methods. This situation is also dehumanizing to all concerned. Most new practitioners will achieve at least the minimum safety level through trial and error learning, knowledge that colleagues have time to impart, and clues and directions for professional performance recalled from their preservice program. At present, one of the declared purposes of continuing and inservice education for teachers is remediation--a purpose that tacitly assumes beginning teachers are less than fully qualified.

Several factors act to disguise or soften many of the harmful effects of inadequate preservice preparation: (1) the traditional structure of the public school puts strong pressure on beginning teachers to conceal their inadequacies and, within limits, permits that concealment (Ladd, 1966); (2) educational death is incremental rather than sudden; (3) the total responsibility for any child's education is vested in many people; (4) children are somewhat durable; and (5) most beginning teachers do survive and reach an acceptable level of teaching proficiency. Smith, Cohen, and Pearl (1969, p. 152) believe that deficiencies in initial teacher preparation have especially severe consequences for disadvantaged students, who are often taught by beginning teachers with unrealistic expectations and little understanding of their pupils.

The concept of a safe level of beginning teaching skills is usually viewed from the perspective of primary and secondary clients, and rightly so. Children, parents, and the general public are entitled to have fully competent professionals in charge of such a vital service as classroom teaching. However, other persons also have a right to expect competence--administrators,

who depend on the teacher education system and who must take the beginning teacher's credentials largely at face value; and fellow teachers, who suffer with and as a result of an inadequately-prepared colleague. Above all, practitioners themselves are entitled to receive a fully professional preservice education, so as to begin their first solo teaching assignment with both the knowledge and the skills to perform at the minimum safety level.

We know that beginning teachers suffer a good deal of anxiety stemming primarily from the discrepancy between their ideal goals and the actual motives they find themselves following in their practice (Jersild, 1966). We also know that many of them regard the professional component of their education, except for student teaching, as having little relevance to the reality of classrooms (Hermanowicz, 1966). And we know that the biggest surprises beginning teachers say they find are (a) their lack of preparation to accommodate the broad range of student abilities and interests, (b) the fact that students are less enthusiastic than anticipated, (c) the enormity of management and control problems, and (d) the demands teaching makes on their time and energies (Hermanowicz, 1966).

A Personal Rather Than Professional Base

Most beginners do survive their first years in the classroom and become teachers who clearly are not incompetent and who clearly do not damage students. Their success under the less than satisfactory conditions of their preparation for and induction to teaching is greatly to their own and their colleagues' credit. But does the inadequacy of their original preparation have any further consequences for them?

From his sociological studies of teachers and teaching, Lortie (1975) concluded that a major dimension of teaching practice was its strongly personal basis. In this case, <u>personal</u> implies not simply that teaching involves humane contact between persons, but that an inordinate amount of the responsibility for what happens in the classroom resides in the teacher as an individual, rather than as a representative of a profession. Instructional decisions are personal decisions based on personal observation, and the dominant justification for using and continuing to use any specific practice is personal pragmatism: "It works for me." This personal autonomy is different from professional autonomy that says, "We have determined that this works and I have determined that this is what my client's situation calls for." Lortie found that, as a consequence of the personal basis of power and control in the classroom, teachers see themselves as having no clear, concrete authority for educational practice and so lapse further into individualism and a self-defeating derogation of education. Even when teachers can see definite growth and learning among their students, they are reluctant to take credit for it because they are not sure that the gains would not have occurred without their intervention.

Because teachers lack a professional culture transmitted by a professional education system, accountability--conceived either negatively or positively and either narrowly or broadly--is a difficult concept. Teachers cannot think of education as a group effort with norms, based on knowledge and consensus, that one can reasonably expect--and be expected--to meet (Lortie, 1975). They commonly judge their professional education as "too theoretical." However, analyzing their specific complaints in light of conventional definitions of <u>theory</u> reveals that teachers are not objecting to theoretical studies <u>per se</u>; rather, "theoretical" is synonymous in their minds with "unrealistic" or

"contrary to experience." The problem is that teachers receive lofty official goals without the means to reach those goals (Hermanowicz, 1966; Lortie, 1975; Smith and Silberman, 1979).

Both beginning and experienced teachers consistently point to two areas of need in their professional practice--discipline and motivation (Gorton, 1973; Cruickshank, Kennedy, and Myers, 1974; Kennedy, Cruickshank, Myers, 1976; Ingersoll, 1976; Adams, 1979). Pigge (1978) found that teachers gave their teacher education institution more credit for developing proficiencies in areas the teachers rated as less needed than in areas they rated as highly needed.

To prospective teachers, their education for teaching is a matter affecting the quality of life. The burden on teacher education institutions is, first, to provide a firmer and more reasonable idea of what teachers can accomplish, and second, to provide the means to accomplish it. We question whether these goals can be achieved within the present system.

Certainly, teacher educators cannot blame all the faults and failures of their programs on lack of time and resources. Extending the time available for teacher education carries with it an obligation for substantive reform. However, we do believe that inadequate time and resources for initial teacher preparation have created an educational system founded on a deficiency assumption.

Minimal Professional Requirements

Examining the history of teacher education, we find an overall pattern of evolution: As the importance of education to individuals and to society grew, and as society demanded more of teachers, the length and rigor of preservice teacher education increased. In the United States, teacher education developed until, in the first half of this century, it fit into one of the established patterns of education: the four-year undergraduate college degree. The demands made on teachers and the level of performance expected of them have continued to increase; but the average time allocated to preservice teacher education has not increased by any appreciable amount in at least the past 15-18 years, except for the addition of approximately four credit hours in the clinical experiences component. (Compare the results of a recent study of preservice education [The State of Teacher Education, 1977] with the results of an earlier study [Hodenfield and Stinnett, 1961].)

Clark and Marker (1975) noted that teacher education has inherited all the problems endemic to undergraduate education: low funding based on head count and an inexpensive lecture format, low prestige within the academic community, and low rewards to faculty members for devoting their time and energy to it. In addition, by being included among other more numerous undergraduate units instead of receiving autonomy as a professional school, teacher education has acquired special problems derived from its low status in the academic hierarchy. Within the time constraint of undergraduate education, teacher education has to compete for students' time and occupies a restricted space somewhere between that of an undergraduate minor and a major.

On the average, 20 percent of the total coursework required of a secondary teacher and 40 percent of that required of an elementary teacher consist of professional studies (Haberman and Stinnett, 1973). Conversely, for 60 to 80 percent of their education, students are not recognized in any significant way as professionals in training and have no contact with the teacher education unit (Clark and Marker, 1975).

Elementary majors average 37.5 semester hours in professional studies and 11.8 hours in clinical studies; secondary majors average 25.4 semester hours in professional studies and 10.7 hours in clinical studies (The State of Teacher Education 1977). Furthermore, under the certification requirements of some states much skimpier programs are possible. For example, 25 of the states that published their minimum certification requirements in 1974 permitted secondary teacher certification with only 12 to 18 credit hours of professional studies, including student teaching. Ten states set the minimum requirement for elementary programs at 18 or fewer semester hours of professional studies, including student teaching (Stinnett, 1974). Woellner (1978) listed 22 states as still accepting 18 or fewer credit hours for secondary programs.

Such limited life space cannot begin to contain a fully professional preservice education for teachers. Recently, a committee of Kentucky public school teachers (Harvey, 1979) studying that state's requirements for provisional high school certification expressed concern over the proficiency of entry level teachers and delineated 34 skills, areas of knowledge, and experiences they felt were not adequately addressed in initial preparation programs--including the teaching of reading, individualizing instruction, group dynamics, problem solving, and early in-school experiences. The committee, working within the constraint of four years of preparation, proposed a 36 semester hour (minimum) professional preparation component for the provisional high school certificate --quite a bit more than the 17 semester hours now specified as the minimum.

Societal Demands: Public Law 94-142

As an example of how the demands on teachers have increased while the program space for their preparation has not, let us examine only one of the many areas of societal concern: Public Law 94-142, The Education for All Handicapped Children Act. Of all current demands on public education, PL 94-142 poses the most visible, most urgent, and perhaps most difficult challenge. The law has already been implemented faster than needed changes in teacher education programs can take place. As a result, teacher educators have necessarily made only superficial responses (Reynolds, 1978, pp. 25, 28). Yet minimal, token responses--including those that teacher education institutions have already made--will not meet either the spirit or the letter of the law; will not be accepted as sufficient by the courts; and, most important, will not be effective in achieving the desired educational equity.

Some implications for initial teacher preparation are clear: classroom teachers will need knowledge of due process procedures, skills in preparing and using individualized educational programs (IEPs), and consultative skills for working with parents and resource specialists. Other implications are more subtle. For example, the specific requirements of PL 94-142 focus on individual achievement and academic performance; however, educators cannot overlook the fact that the reality of the law involves a social situation--social integration, to be exact--and a distinct philosophy of education (Schlechty and Turnbull, 1978). Also, most regular classroom teachers are now taught to equate educational diagnosis with norm-referenced testing. To work with handicapped students, teachers will have to gain knowledge and skills in domain-referenced assessment and task analysis (Reynolds, 1978, p. 28).

While teacher education institutions must take steps to assist classroom teachers already practicing, they must also incorporate these added skills into programs for prospective teachers. Responsibility for the education of children with special needs will confront beginning teachers on their very

first day. Yet a major program level obstacle in preservice teacher education for PL 94-142 is the "credit hour dilemma" (Weisenstein and Gall, 1978). A teacher education program faculty may judge that the needs of prospective teachers demand an expanded program, but because of state or institutional limitations they cannot add credit hours to existing programs. Thus they are forced to juggle and reallocate hours within the existing course structure--especially difficult in secondary programs. The education unit cannot intrude into the content areas without encountering resistance from departments outside education.

Teacher education faces the same situation for such other challenges as multicultural education, bilingual education, and consumer education. We are obligated to make more than token responses, yet we are constrained from doing so by a traditional institutional pattern.

Views Supporting Extended Preparation

While there is no clear consensus among educators on the question, we can cite a variety of proposals that favor extending initial preparation programs for teachers. With the present emphasis on accountability in education--plus the fact that teacher education is no longer under pressure simply to fill classroom vacancies--a context exists in which extended programs seem both necessary and feasible.

The AACTE Commission on Education for the Profession of Teaching (Howsam et al., 1976) recommended a five-year initial teacher preparation program combining the bachelor's and master's degree, plus a sixth year of supervised internship.

Morris Cogan (1975) has been audacious enough to recommend three full years of post-baccalaureate study, supervised practice, and supervised internship. He terms his plan a "heresy" but presents it anyway because "no one- or two-year plan of teacher education has yet been proposed that holds any promise of turning out beginning teachers who possess even minimal initial competencies needed in contemporary schools" (p. 213).

William G. Monahan (1977), dean of the College of Human Resources and Education at West Virginia University, thinks that adequate teacher preparation programs will require "at least two or three years beyond the junior year in college" and that such extended programs are necessary if talk about the importance of teaching is to be taken seriously.

Lawrence Cremin (1978), president of Teachers College, Columbia University, recommended a six-year program combining the bachelor's degree and a doctorate of teaching.

B. O. Smith (Smith and Silberman, 1979) proposed that prospective teachers and persons preparing for other education-related employment first obtain a bachelor's degree with an academic major and other academic work to support the study of pedagogy and then complete a two-year master's degree program in education, with continuing assistance from the education unit during the first year of employment. A third year of graduate study leading to the doctorate would be available for professional specialization.

The Commission on Public School Policy in Ohio (K. Ryan, Klien, and Krasno, 1972) recommended a five-year initial preparation sequence with liberal and professional studies integrated from the junior year on. Graduates would receive a bachelor of arts or sciences degree and a master's degree in teaching.

A conceptual framework for a five-year program, including internship, and followed by a two-year probationary period, has been developed by Thomas Ryan at Western Michigan University (1979). In 1976, the Virginia General Assembly enacted a five-year program including a one-year internship, but its implementation has been postponed.

T. H. Bell, Utah Commissioner of Higher Education, said: "Everything gets makeshift treatment when we try to offer to young people a basic liberal education, a subject matter specialty in a chosen field of concentration, a working knowledge of educational psychology, the basic principles of education, curriculum and methods, and student teaching experience, all in four years of college" (1979).

At the University of Kentucky, the variety of sources that have told us of the need for extended programs include a group of graduates who participated in a follow-up study (Arnold and Wilson, 1976), a group of elementary school principals who met with the University's elementary education faculty, and a committee of public school teachers of the Kentucky Council on Teacher Education and Certification (Harvey, 1979). Harry Snyder, executive director of the Kentucky Council on Higher Education, and David Ruggles, associate director of undergraduate programs, have suggested that five-year preservice teacher preparation programs be considered as a means to "allow higher education institutions to increase their contributions to professionalism among teachers under the optimal conditions which exist on their campuses," while reducing "higher education's attempt to do all things in teacher education through the higher education credentialing system" (Snyder and Ruggles, 1979).

Our Recommendation

The present system of initial teacher education is not meeting its obligations to individual teachers, the teaching profession, and the public as well as it should. "The problem is not that we cannot prepare teachers, but that we do not prepare them. We do not prepare teachers because we are captives of a simplistic notion that we can train them as teachers at the same time that they are earning their undergraduate bachelor's degrees. . . . We have taken a short-sighted, on-the-cheap approach to teacher education and we are getting what we paid for" (K. Ryan et al., 1972).

Teacher education, when judged by what its clients need and what it potentially can offer them in the way of professional culture, has outgrown the four-year undergraduate model. We believe that the field is backward in not taking the next step to a more fully professional model by extending its life space beyond four years, with the amount of increased studies to be determined on the basis of the profession's requirements rather than traditional institutional patterns.

Accordingly, we recommend a six-year program of initial teacher preparation--five years of campus-based, but field-oriented, preparation followed by a sixth year of supervised internship with provision for follow-up of beginning teachers in their first year of regular employment.

THE KNOWLEDGE BASE SUPPORTING EXTENDED PROGRAMS

Attainment of full professional stature for teaching is much more than a matter of personal status and economic advantage for those who teach. As Howsam has said, the most critical determinants of quality in education are the schools and the teaching profession. Clearly, schools cannot improve their effectiveness ". . . except as teacher education is upgraded and the capacity of teachers to perform with professional proficiency is achieved" (Howsam, 1979, p. 1).

Knowledge and the Professions

Specialized knowledge and education are central to three of the distinctive characteristics of a profession:

1. The profession collectively, and the professional individually, possesses a body of knowledge and a repertoire of behaviors and skills (professional culture) needed in the practice of the profession; such knowledge, behavior, and skills normally are not possessed by the nonprofessional.
2. The profession is based on one or more undergirding disciplines from which it draws basic insights and upon which it builds its own applied knowledge and skills.
3. Preparation for and induction to the profession is provided through a protracted preparation program usually on a college or university campus. (Howsam et al., 1976, pp. 6-7)

Moreover, specialized knowledge and education underlie many of the remaining characteristics of a profession. Both the freedoms and the responsibilities that accrue to members of a profession derive from the unique, valuable knowledge they possess. As Broudy (1956) noted more than 20 years ago, it is immoral to assert professional autonomy for teachers unless they possess superior knowledge.

Thus, the adequacy of education's knowledge base is pivotal to the case for extended programs of teacher preparation. Is the knowledge base sufficient to support an extended, fully professional initial preparation program for teachers or, at least, to support a major step in that direction? We share with Gage (1978), Good (1979a), Smith and Silberman (1979), and Howsam et al. (1976) a conviction that the knowledge base for teaching is substantial and developing rapidly--although what we know has not been organized and institutionalized effectively and, therefore, has not been transmitted adequately to practitioners. Furthermore, we believe the present knowledge base justifies lengthening and reforming initial teacher preparation programs.

Some skeptics would take issue with this view, on the grounds that we are unable to demonstrate any universal principles about teaching. The argument is invalid. Absence of universals does not support a conclusion that the knowledge base for teacher education is inadequate. Rather, the standards for judging educational knowledge must be based on the nature of the profession.

Education derives much of its foundational content from the behavioral and social sciences, which themselves are constantly struggling to accommodate the complexity of a large number of interactive variables, some of which inevitably will be unanticipated or undetected. Knowledge about teaching, like most knowledge in the professions rooted in the social and behavioral sciences, is probabilistic and subject to the variability of social contexts and individuals.

Cronbach and Snow (1977), in reminding us that social science research cannot arrange the controlled situations of the natural sciences, observed that "a generalization will almost never prove to be true in more than, say, 75 percent of classrooms of a type (e.g., first-grade classrooms in urban settings). Such a probabilistic truth is informative, as a source of practical policies and as a basis for insight. But we cannot be content to set policy for the individual classroom in terms of an Iron Law that has a 25 percent chance of working out badly for that class" (p. 493). And D. Bell (1966) noted that, while the knowledge of science and mathematics is largely sequential, the pattern of knowledge in the social sciences requires an understanding of linkages or interrelationships.

We cannot reject probabilistic knowledge because it supplies no universal answers, or because its application requires the exercise of intelligent and sensitive judgment. On the contrary, teaching demands important judgments in applying knowledge to a particular combination of individual and social needs.

A Dimension of Professional Knowledge

In the interest of brevity, we have chosen to review research data in only one dimension of pedagogical knowledge: the area of teacher effectiveness. Obviously, the logic of building the teacher education curriculum around its data base would require similar analyses of research in all areas of teaching and learning--inquiries relating to subject-specific and age-level-specific concerns as well as this generic component. Similarly, broad principles from the social and behavioral sciences would need to be identified from reviews of the disciplines undergirding education. Moreover, as in other professions, the knowledge base in teaching is an outgrowth of professional wisdom (the systematically collected experience of many professionals) and logical analysis as well as research. All these components must be considered in the design of teacher preparation programs. A major task of teacher education is to elevate the level of teaching practice from the personal to the professional through the expansion and use of research, professional wisdom, and logical analysis.

Perhaps the place to begin is with the logical notion that good teaching is associated with teachers' pedagogical knowledge and skill, as well as their knowledge of the subject matter to be taught. Some would urge that the ultimate test of a teacher preparation program be effective teaching performance on the part of its graduates, measured in terms of impact on the learning of those instructed. Such basis for assessing the effectiveness of teaching performance and teacher education seems logical and compelling. The public and their legislative representatives are increasingly intent on holding individuals and institutions accountable for how well they perform, rather than what they promise.

Other Influences on Learning

Certainly, we must base judgments about effective teaching and teacher education on more than a litany of impressive objectives or evidence that teachers possess certain characteristics or follow recommended procedures. We cannot judge teachers successful simply because they employ approved methods, if their students are not making adequate progress in learning. At the same time, we cannot assign responsibility for all student failures to learn to their teachers and, in turn, to their teachers' preparation programs. Obviously, many influences on children and youth affect their interest in learning and the readiness with which they approach school experiences. No teacher influences students' learning in isolation.

Two decades ago, in a classic study of teacher characteristics, Ryans (1960) identified textbooks, prior learning, previous teachers, home influences, influence of peers, ability, study habits, and emotional makeup among factors that, in addition to the teacher, differentially affect students. To hold that many factors influence learning is only to recognize reality; but to conclude that such complexity makes efforts to assess teaching in terms of learning unnecessary or unproductive is a serious mistake. We cannot afford the luxury of expending large amounts of time and money in training activities that have never been tested for effectiveness.

We should assume neither that all instructional efforts which fall short of perfection are ascribable to individual or institutional incompetence nor that good teachers and effective teacher preparation make little difference. Teaching has always required a capacity to live with partial success while continuing to aspire for the ideal.

Research on Teacher Effectiveness

McDonald (1976a) cited research suggesting that teacher influence in many circumstances may account for only about 25 percent of the variance in pupil achievement, approximately the same as the estimated effects of socioeconomic status. He observed that "our expectations for teacher effects should be both more modest and more sanguine" and that our frequent research findings of "no significant difference" result from looking for the impact of teachers in the total arena of student behavior rather than in the portion that may be properly assumed to be subject to teacher influence.

Recent studies by a number of researchers indicate that specific teacher behaviors in the classroom, combined with appropriate instructional content and classroom climate, are highly instrumental in promoting some types of learning as well as classroom order. Our review is intended only to suggest the promise of research on teaching for the improvement of teaching and for the design of teacher preparation programs.

Thomas L. Good, a major figure in research on teacher effectiveness, asserted that a data base for the content of teacher education is developing, that it is now in the process of moving from a speculative base to a conceptual and empirical base, and that it is substantial enough to provide content and direction for teacher education. On the basis of process-product studies, "classroom management, direct instructional principles, and information about teacher expectation effects would appear to be sensible parts of teacher education programs. . . . The balanced conclusion that teachers can make a difference in some areas but that it takes hard, sustained work (and still there will be some students who cannot be motivated) is a view that seems a

more reasonable posture for teacher education programs" (1979a). Good believes the most important result of teacher effectiveness research has been the development of concepts through which teachers can and "will necessarily have to interpret the form of potential applications in light of local conditions, distinct education values, etc." (Good, 1979a).

N. L. Gage (1978) proposed that we consider clusters of studies rather than single studies and test for significance in the combined results. Gage, director of Stanford University's Program on Teaching Effectiveness, illustrated his proposal by appraising results from studies of teacher behavior in four clusters: teacher indirectness and student achievement; teacher praise in relation to pupil attitudes; teacher acceptance of pupil ideals in relation to pupil achievement; and teacher criticism and disapproval and their impact on achievement. He concluded that "we do have some relationships between teacher behavior and pupil achievement and attitudes on which a scientific basis for the art of teaching may be erected." He noted that ". . . the path to increasing certainty becomes not the single excellent study, which is nonetheless weak in one or more respects, but the convergence of findings from many studies, which are also weak but in many different ways. . . . Where the studies do not overlap in their flaws but do overlap in their implications, the research synthesizer can begin to build confidence in those implications" (Gage, 1978, p. 35).

Tentative conclusions supported by current research include:

1. Real effects may be expected from differences in teacher behaviors and other instructional variables (e.g., Stallings and Kaskowitz, 1974), but the effects that may be expected--and detected--within, say, a year's time are probably much more modest than formerly thought.

2. There apparently is no single effective instructional method or individual teacher behavior. To expect one isolated teacher behavior to show easily detectable effect on student learning is naive. Rather, teaching is a complex act and must be examined as constellations of behaviors and as behavior occurring in a larger context (e.g., Dunkin and Biddle, 1974; Cruickshank, 1976; McDonald, 1976a; Brophy and Evertson, 1978; Gage, 1979; Good, 1979a).

3. Effective teacher behavior varies according to the subject being taught (e.g., Tikunoff, Berliner, and Rist, 1975; McDonald, 1976a, 1976b; McDonald and Elias, 1976; Soar and Soar, 1976). The possible amount of positive teacher influence may vary according to subject area. Home environment may more strongly influence achievement in subjects such as reading and social studies than in "school" subjects such as science, mathematics, and foreign language (e.g., Coleman, 1975; McDonald, 1976b; Stallings, 1976; Evertson, Anderson, and Brophy, 1978). Berliner (1976) noted that teacher behavior has usually been studied in the subjects most strongly influenced by the home.

4. Effective teacher behavior varies according to such pupil characteristics as age and socioeconomic status (e.g., Tikunoff, Berliner, and Rist, 1975; Brophy, 1976; Brophy and Evertson, 1974, 1976, 1978; McDonald, 1976; McDonald and Elias, 1976; Medley, 1979; and the impact of teacher behaviors on learning may be greater for some types of students than for others. Gage (1979) concluded that

the findings of research to date support both generality (that there are instructional methods and teacher behaviors effective regardless of subject, student characteristics, and so forth) and specificity (that there are methods and behaviors effective for specific subjects, types of learning, students, and so forth).

5. The stability of measures of teacher effectiveness and teacher behaviors is low or moderate from year to year (e.g., Brophy, 1973, 1976; Berliner, 1976; Shavelson and Atwood, 1977), but teachers who are low in effectiveness tend to remain low in effectiveness (Good, 1979b).

6. Individual teachers do make a difference; differences among teachers are substantial, and relatively effective and ineffective teachers can be identified for study (e.g., Veldman and Brophy, 1973; Brophy and Evertson, 1974; Berliner and Tikunoff, 1976; McDonald and Elias, 1976).

7. One area of teacher effectiveness research supports the folklore about classroom management--its importance and how to go about it--commonly found among teachers. However, both correlational and experimental studies are beginning to organize the amorphous term "classroom management" into principles by which the consequences of behaviors can be predicted and salient missing behaviors identified and developed (e.g., Kounin, 1970; Brophy and Evertson, 1976, 1978; Good and Power, 1976).

8. Differences among teachers in classroom management skills are detectable early in the school year, continue throughout the year, and predict levels of student attention and involvement later in the year (e.g., Anderson and Evertson, 1978).

9. The basic principles and specific skills of classroom management can be taught to teachers, and indications of how teachers best can be taught are accumulating (e.g., Mackey, Glenn, and Lewis, 1977; Ponder and Doyle, 1977; Berliner, 1978; Crawford and Stallings, 1978; Stayrook and Crawford, 1978; Good, 1979a).

10. A pattern of instruction being increasingly supported by research is called direct instruction. Employing direct instruction, "a teacher sets and articulates the learning goals, actively assesses student progress, and frequently makes class presentations illustrating how to do assigned work. Direct instruction does not occur when teachers do not actively present the process or concept under study, when they fail to supervise student seatwork actively, or if they do not hold students accountable for the work" (Good, 1979b, p. 55).

    A major dimension of direct instruction seems to be time--the crucial time for gains in student achievement being that in which students are actively engaged in instructional activities (Fisher et al., 1978). This fact implies that instruction must be challenging, interesting, and varied enough to keep students' attention; and, in turn that teachers must be highly skilled in designing instruction, selecting materials, and motivating students.

Soar and Soar (1976) found that there appears to be an optimum level for teacher directiveness. The common assumption that "more is better" does not hold.

Direct instruction promotes a potentially repressive type of teaching if it is understood simplistically and its principles applied rigidly. Dunkin and Biddle (1974, pp. 94-133) have documented and analyzed the ideological confusion of coldness and directiveness in past research on teaching; effective teachers must understand the difference. Rosenshine (1979) noted that the relatively formal classroom indicated by the direct instruction pattern does not necessarily have to be humorless, cold, and rigid; and teachers in the formal classroom do not necessarily have to be critical of the child.

11. Teachers and teacher educators cannot ignore research showing that classroom climate and affective behaviors are important (e.g., Tikunoff, Berliner, and Rist, 1975). Open approaches have been found superior in promoting positive attitudes toward school and teacher, independence, creativity, and curiosity (Peterson, 1979). Stallings and Kaskowitz (1974; Stallings, 1976) found that open classrooms promoted school attendance whereas direct academic questions and large-group instruction correlated with increased absences, and that children in more flexible classrooms scored higher on a test of nonverbal problem-solving ability. Research by Soar and Soar (1976, 1979) suggests that expressing positive affect in the classroom is important, but may not be nearly so important as not expressing negative affect. However, a study by Peck and Veldman (1973a) indicated that teachers whose students made the greatest gains in achievement test scores were rated least pleasant and interesting by students.

12. Another major area that research identifies as influencing student achievement is teacher expectations (Brophy and Evertson, 1976; McDonald and Elias, 1976). Brophy (1976, p. 31) noted that, although the relationship between teachers' expectations and student achievement (the "self-fulfilling prophecy") was delineated by Rosenthal and Jacobson in 1968, "until recently, teacher education programs and textbooks had little to say about how inappropriate expectations or attitudes can cause teachers to behave in self-defeating ways. Now a data base exists which grows regularly, indicating how teachers treat students when their expectations or attitudes interfere with optimal instruction. As these data become well known, problems of undesirable self-fulfilling prophecy effects should be minimized."

Brophy identified some of the negative teacher behaviors exhibited as "providing low expectation students with more criticism and less praise, feedback, individualized attention; calling on them less frequently and being less willing to wait patiently for an answer if one is not given immediately; and refusing to allow them to even attempt work believed to be too hard for them. In short, self-fulfilling prophecies occur when teachers treat low expectation students by expecting less from them and teaching less to them."

Limitations of Research

While research on teacher effectiveness holds real promise for teacher education, teachers should recognize its limitations:

1. Researchers are still working to define and clarify the variables of teacher effectiveness (Heath and Nielson, 1974; Berliner, 1976; Kennedy and Bush, 1976; Good 1979a). Bush, Kennedy, and Cruickshank (1977) provide a good example of work being undertaken to identify factors involved in variables as nebulous, but apparently important, as clarity of presentation.
2. The majority of research has been limited to basic skills development in reading and mathematics in grades one through five (Rosenshine, 1979). In a study of junior high school students, Evertson, Anderson, and Brophy (1978) found indications that indirect instruction may become more effective and feasible with older students, especially those of high ability.
3. The direct instruction model does not seem consonant with the goals of certain types of instruction, art and social studies for example. So far, most research has defined "student achievement" as "score on standardized achievement tests." Only the narrow goals reflected in such tests have been assessed to any extent. As Berliner (1976, p. 6) noted, "off-the-shelf standardized tests make poor dependent variables for studies of teaching" because they lack content validity at the classroom level; correlate highly with standardized intelligence tests; and are questionable when used with young, bilingual, or culturally different children.

Needed: A Broad Range of Teaching Skills

In a study of 27 primary grade teachers who had consistent patterns of student gains on standardized achievement tests over three years, Peck and Veldman (1973b) found relationships between the judgments of classroom observers and various psychological instruments that did not relate in turn to students' gains on achievement tests. The researchers suggested that the results pointed to another type of effective teaching. They concluded:

> . . . beyond some moderate point, it almost looks as though those who get children to learn the mechanical, atomized knowledge and skills tapped by standardized achievement tests might unwittingly deter other kinds of learning, creating a subtly depressing, low risk-taking atmosphere that could conceivably keep children from learning to cope vigorously, self-reliantly, and happily with problems of learning and living.

Medley (1979) observed that most of the patterns of teacher characteristics and behaviors research has identified as bearing on student learning appear to be potentially modifiable by training. Teachers need to acquire a wide repertoire of skills and the ability to select according to context. Similarly, Brophy said:

> . . . it is a fundamental misconception to equate effective teaching with the mastery and use of a few general approaches. Instead, it seems intuitively obvious (and data from our own studies and from many others support it) that effective teaching involves the orchestration of a very large number of relatively limited principles linking specific stimulus situations to teaching responses that differ in probable effectiveness. (1976, p. 34)

Teacher effectiveness research is not to the point where firm prescriptions for teachers may be drawn from it. Rather, it is essential that teacher education based on research in teacher effectiveness be conducted at a level more advanced than the simple application of technical principles, and in a context that permits practitioners to accept principles as hypotheses to be tested. This conception of the use of research is consistent with a professional rather than a technician view of teachers.

In Summary. This limited sampling of recent research on teacher effectiveness lends support to the assertion that we now have enough pedagogical knowledge to justify significant reform and expansion of teacher preparation. Gage (1978), in considering applications of teacher effectiveness research to teacher education programs, called for more work linking studies of desirable teacher behaviors with studies of preparation programs and their impact on the development of such behaviors.

Education is a profession, one that draws on the knowledge of many supporting disciplines and generates additional pedagogical knowledge. Effective teaching can be built on a scientific base, but as with other professions, teaching requires important components of judgment to adapt performance to situation. Elevating the level of teaching practice from the personal to the professional is vital to attaining genuine professional stature for teaching.

CURRICULAR COMPONENTS OF INITIAL TEACHER PREPARATION PROGRAMS

The education of teachers should be considered to begin with admission to college; it continues throughout their professional careers. Preservice education, inservice education, and continuing professional development are essential parts of a unified developmental process. Each makes an important contribution to the professional lives and performance of teachers; designing one in isolation from the others is likely to result in distortions of the career-long process. However, our discussion will confine itself to components of initial teacher preparation programs: generic teaching domains, specific pedagogical learnings, general education, preprofessional education, academic specialization, and induction and field experiences. The section concludes with some observations about relationships of preservice preparation with inservice education and continuing professional development.

Generic Teaching Domains

Campus-based teacher preparation programs must necessarily be generic in nature, directed toward preparing teachers to work effectively in a wide range of educational settings and to utilize a broad array of instructional skills in responding to the different learning styles of many children. To do otherwise is to make teachers technicians trained in a narrowly prescribed band of procedures, rather than practitioners educated to develop an understanding of the underlying principles for the performance skills. In this way, practice can be modified to meet changed circumstances. However, generic does not mean vague; it means that specific situations and examples are employed, principally to illuminate broader teaching concepts.

Common Skill Domains from the Helping Professions

In a study of human service or helping professions, Cole and Lacefield (1978) identified a series of process skill domains that representatives of professions such as nursing, social work, counseling, and teaching consider important:

1. Achieving, exhibiting, and maintaining competence in the academic content of the discipline or profession
2. Cogent and accurate verbal communications (semantics)
3. Making observations, constructing inferences, and distinguishing between the two
4. Using multiple theoretic-conceptual frameworks to observe and infer
5. Showing and maintaining respect and regard toward others, especially clients
6. Value clarification
7. General fluency and flexibility of thought, perception, and response.

Competency Clusters

In an effort to identify competencies that regular classroom teachers need if they are to serve students with handicaps and learning difficulties,

Reynolds et al. (1979) listed nine competency clusters representing a common body of practice for teachers:

1. Curriculum: Study of and firsthand experience with curriculum principles, guides, and structures from preschool through secondary levels; the means and procedures by which curriculum is developed, adopted, and changed; and practice in designing and modifying curriculum, especially to suit the individual needs of students.

2. Teaching Basic Skills: Instruction in teaching the skill areas as such; and supervised practical experience in simulated laboratory and field settings, including teaching of literacy skills, life maintenance skills, and personal development skills.

3. Pupil and Class Management: Proficiency in such procedures as applied behavior analysis, group alerting, guiding transitions, materials arrangement, crisis intervention techniques, and group approaches to creating positive climate.

4. Professional Interactions: Opportunities to master the knowledge and practices involved in effective consultation and other forms of communication.

5. Student-Student Relationships: Ability to convey to students that they bear some of the responsibilities for their social environment and must be willing to help one another; to manage the social structures of classes by generating cooperative, mutually helpful behavior among students; to develop heterogeneously cooperative grouping procedures and peer and cross-age tutoring; and to teach students to use some of the basic counseling/guidance skills in relationships with other students.

6. Exceptional Conditions: Preparation in understanding exceptional children, in school procedures for accommodating to children's special needs, and in the roles of specialists who serve exceptional children; and hands-on experiences with the children and conferences with their parents.

7. Conferral and Referral: Training in how communities organize and conduct their agencies for social welfare, health, and education; systematic instruction in the roles and functions of (a) referral sources within the school structure and (b) agencies outside the schools that accept referrals; and firsthand experience in how both in-school and community agencies operate.

8. Individualized Teaching: Competence at the clinical level in assessing the individual student's educational needs and in adapting instruction to the individual. Starting from the first week of teacher preparation, and continuing until its completion, trainees should be in the company of experienced teachers who individualize education expertly.

9. Professional Values: Much more detailed and powerful codes of ethical behavior, so that examples of acceptable behavior can be

studied and internalized, and ambiguity and uncertainty minimized. School law, and the regulations that relate to it, should become part of the foundation of preparation for all educators--for safeguarding pupils' rights, for self-protection, and for advocacy when new or revised laws are needed. (Adapted from summary in May-June 1979 issue of TEACH: Teacher Education and Children with Handicaps)

Thomas Ryan (1979) proposed six competency areas as a basis for teacher preparation and certification in Michigan: "Knowledge of self, knowledge of concept, knowledge of development and learning, ability to communicate, ability to manage instruction, ability to evaluate instruction."

Still another framework for identifying essential teaching skills, proposed by Ashton and Torrance (1977), included "observation, experimentation, communication, diagnosis, instructional design, and evaluation."

A Proposed Framework for the Generic Component

The framework of generic teaching domains we propose overlaps all of these proposals but is adapted principally from a manuscript by Smith and Silberman (1979). The seven domains listed are not to be understood as courses but rather as dimensions of knowledge and skill essential to the professional teacher and subject to treatment at many points in the curriculum.

1. Observation: "The ability to observe a phenomenon objectively is one of the primary marks of a professional in any field. In a field that involves relationships among human beings, objective observation is especially important. It is a safeguard against biases and prejudices of all sorts--racial, class, socioeconomic, ideological, and personal" (Smith and Silberman, 1979).

2. Diagnosis: Analysis of student abilities, learning difficulties, environmental conditions, and programs of instruction (Smith and Silberman, 1979).

3. Instructional Design and Collaborative Planning: Understanding of different types of learning, skill in defining objectives and determining the sequence of instruction. Preparation of instructional programs, materials, and activities with recognition of the need to coordinate such efforts with colleagues.

4. Instructional Management: Of space, time, resources, processes of teaching, student conduct. "With the possible exception of diagnosis, this is the domain in which more time must be devoted to training than any other. It is here that the prospective teacher must be disciplined in the skills of teaching and all the various aspects of classroom management. It is here that skills involved in such activities as lesson development, conduct of seat work, recitation, reinforcement, feedback, assignment making, and student accountability are to be developed" (Smith and Silberman, 1979).

5. Communication: Communication skills are central to relating not only to students but also to professional colleagues, parents, and other community representatives. Communication demands a richness of experience that permits the representation of ideas in a variety of

ways and with a sensitivity to the needs of others. It requires listening and reading skills as well as speaking and writing facility. Many of the concepts from counselor education are likely to support the development of skills of listening, interpreting, translating, and responding to students, parents, and professional associates.

6. Evaluation: Development of skills in the techniques of evaluating pupil progress and analyzing data related to diagnosis and planning of instruction. Also, development of skills in administering and interpreting standardized tests and designing valid, reliable measures of both formal and informal learning.

7. Pedagogical Values: This domain, like that of observation, permeates all of the other preparation categories. "The central task of teacher education is to provide teachers with a philosophy of education that will help them to think seriously and continuously about the purposes and consequences of what they do. This entails being aware of the value system of a particular educational environment as well as the effects of a personal value system on a school environment" (Howsam et al., 1976, p. 89).

The categories proposed by Smith and Silberman did not include pedagogical values. In a letter to us, Smith suggested that too often the degree of our preoccupation with value questions is in direct proportion to our ignorance of the knowledge base supporting effective teaching. Nonetheless, we include it as an important element of our proposal, because it can contribute not only to understanding what beginning teachers must be able to know and do to survive in the classroom, but also to developing a vision of what individuals and institutions might become.

Logical Operations in Teaching

Within the categories of instructional design and instructional management, some important teaching operations are common to teachers in every subject field and at every grade level--though, to be sure, in varying proportions. Broudy, Smith, and Burnett said that:

> Altogether one can distinguish some twelve different sorts of identifiable logical operations performed by teachers and pupils in the classroom: . . . [defining, explaining, assessing,] conditional inferring, classifying, comparing and contrasting, designating, reporting, stating, substituting, opining, and describing. (1964, pp. 118-19)

Unfortunately, the authors concluded that current programs of instruction often provide inadequately for improvement in these operations beyond a commonsense level.

Importance of Generic Approaches

Identifying common or generic competencies relevant to teaching in all subject areas and at all grade levels is important for a number of reasons. It encourages thinking about teaching less in a personal and particularistic sense and more in terms of broad common understandings. The teacher who

views teaching in a common context with other professionals is more likely to learn from others and contribute to the professionalism of others. If the circle of shared knowledge must be kept small, encompassing only those who teach a particular content at a specified age level, teachers will not receive the reinforcement necessary for a strong profession, nor will their instructional efforts be as likely to relate to and build on the teaching efforts of others.

We have observed that generic does not mean vague. Neither does it imply a narrowly prescriptive teacher preparation program; nor is its consequence a rigid, standardized school curriculum. Teachers prepared in programs containing appropriate generic competency elements can communicate with colleagues more effectively, reinforce the efforts of other teachers, and make better use of the resources available for teacher preparation.

Teacher educators have sometimes been criticized for a rigid, monolithic view of teaching and teacher preparation. In reality, almost the reverse is often the case. Despite similarities in course labels, individual teacher educators and institutions have been disposed to value their differences more than their similarities, on the grounds that such variations show responsiveness to unique teaching/learning conditions and a grassroots, democratic approach to curriculum development. Too frequently, however, variations among programs seem to result more from inadequate communication and fragmented approaches than from careful analysis.

Specific Pedagogical Learnings

Generic knowledge about teaching is only one dimension of the knowledge base with implications for teacher preparation. Other knowledge is content- or subject-specific and varies according to the academic discipline under consideration. Still other pedagogical knowledge relates to age or grade level of the learner--early childhood, middle school, high school, adult. As a consequence, teacher preparation activities need to address teaching/learning skills unique to content areas and/or age or grade levels.

An Example: English/Language Arts Education

In the areas of diagnosis and evaluation, the prospective secondary English teacher (for example) needs generic instruction in constructing and evaluating classroom tests and in selecting, using, and interpreting commercial standardized tests; however, such instruction will not help much in evaluating students' abilities and progress in written composition. Composition activities can be neither designed nor evaluated by the techniques appropriate for, say, essay-type classroom test items; and, while there are commercial tests for predicting success in a composition course, no commercially available standardized test addresses students' ability to select a topic, match the topic to an approach, organize their thoughts, select and marshal detail, and communicate to an audience through writing (Braddock, 1976).

The secondary English teacher will have the task of evaluating and promoting a complex, highly variable skill that can be practiced with wide ranges of proficiency. Further, the strongly personal nature of written composition--the close connection between self and expression--means that the teacher's evaluative strategies will have serious affective consequences if they are inappropriate.

The English teacher can evaluate students' written compositions on four levels: assigning a grade, indicating faults, correcting faults, and teaching writing and thinking (Dusel, 1955, cited in Burton et al., 1975, pp. 148-53). The first level--merely assigning a grade--can be accomplished by a teacher guided by nothing more than personal taste and opinion of what constitutes effective writing. This level of performance requires no subject-specific instruction for the prospective English teacher. The second and third levels--indicating faults and correcting faults--can be accomplished by a teacher who has learned the technical skills of an editor. The fourth level--the professional level at which evaluation serves to teach writing and thinking--requires the English teacher to know and to know how to apply information about language development, the analysis of discourse, and composing processes (National Council of Teachers of English, 1976). Clearly, to achieve this level, the professional English teacher requires some sophisticated subject-specific instruction. The preparation program must make room for such instruction.

An Example: Early Childhood Education

We may illustrate the need for age-specific instruction for teachers by continuing the example of written composition. Children cannot read and write well enough for extended written composition activities until the late elementary grades; therefore, teachers in the early grades might assume that attention to composition should be delayed until children have the mechanical skills under control. In fact, young children have strong skills in oral composition; and a variety of instructional techniques have been developed to expand these skills in oral self-expression (valuable in themselves and as a basis for later written expression) and to use them to promote acquisition of the mechanical skills. To employ the instructional techniques properly, teachers in the early grades also need a firm knowledge of the language acquisition and composing processes as these pertain to young children.

A Departure from the Usual Categories

We have deliberately avoided the usual treatment of the pedagogical components of initial teacher preparation in terms of foundations of education, general methods, special methods, and student teaching. Instead, these generic and specialized learnings could be addressed in appropriate courses; for example, a foundations component of pedagogical studies could illuminate the connections between the undergirding disciplines and their application to educational practice. As Howsam et al. pointed out:

> The central weakness of foundational studies has been the tendency of many foundations professors to look at their fields as if they are full-blown disciplines, each with its own highly specialized conceptual framework, investigative procedures, and research methodologies. . . . The "discipline" approach is a retreat from what should be the basic purpose of all foundational studies in education: to provide interdisciplinary and conceptual illumination of the issues, problems, and procedures confronting contemporary educators everywhere so that more professional and humane public action might ensue. (1976, p. 87)

Rather than dealing with student teaching and prestudent teaching experiences independently, we have chosen to discuss early field experience, reality-based instructional techniques (simulation, microteaching, protocol materials), and student teaching in a later section entitled "Field-Oriented Activities and Induction into the Profession." We view induction into the profession and into the practice of teaching as a process that should begin early in the professional sequence, expand in scope and complexity through student teaching and an internship, and culminate in full-time teaching, with provision for a year of follow-up supervision and consultation beyond the internship.

General Education

The general education of teachers should not differ from that of students in other fields "unless the differences represent extended opportunities for prospective teachers to explore the interrelationship of knowledge and their implications for teaching and learning" (Howsam et al., 1976, p. 82). Common faults of general education programs are skimpy courses with overemphasis on taxonomy, nomenclature, and the use of apparatus--courses designed primarily as introductions to advanced study in the discipline. Inadequacies of general studies are particularly damaging in the case of the prospective teacher, for elementary and secondary teachers are themselves teachers of general education. Consequently, if their own general education has been perfunctory or designed to meet advanced study objectives, the content background they bring to their own teaching has suffered. An adequate general education program should:

1. Contribute to personal development in areas such as physical and mental health, moral and aesthetic values, and creative expression
2. Develop understanding and skills in the symbolics of information
3. Promote an understanding of the natural and social environments
4. Foster an understanding of the interrelationships of knowledge
5. Represent a significant content learning experience because elementary and secondary teachers are teachers of general education rather than trainers of academic specialists.

Preprofessional Education

A major weakness of teacher preparation in comparison with other professions has been the absence of preprofessional studies in the disciplines that undergird education. Perhaps the most dominant of the undergirding disciplines for teaching are psychology, sociology, cultural anthropology, and philosophy; but relevant content is also derived from economics and political science. Rather than the isolated introductory courses offered in general studies, prospective teachers need the opportunity to develop depth as well as breadth in the social and behavioral sciences.

Peters (1963, pp. 21-22) emphasized the importance of knowledge drawn from the supporting disciplines, as well as more direct pedagogical knowledge: "Education, like medicine, is a profession, not a discipline. . . . It can only be an effective one if it draws on the disciplines which lean on its problems." Scheffler (1965, p. 61) underscored the point, urging that we avoid isolating ourselves from "attempts to formulate principles relevant to our work, no matter what their disciplinary labels," and suggesting instead that we

encourage linkages between the social and behavioral sciences and the concerns of schools and teaching.

If we seriously believe that teachers are professionals rather than technicians, we must help them understand the theoretical bases for professional practice. Such understanding will in part depend on a strong program of preprofessional studies.

Academic Specialization

The dichotomy in teaching between content and method has always been a contrived one, for every effective teacher must possess knowledge of the subject matter to be taught as well as pedagogical knowledge and skills. However, the standard college curriculum is wholly unsuited for direct transmission to students in the public schools. Smith, Cohen, and Pearl described the problem:

> To go from the disciplines to the content of instruction involves a tremendous burden of translation. A teacher must sift out what is directly relevant to his work even for the purposes of his own interpretive background. Only in part can the content of the disciplines be adapted to the child's level of knowledge and experience. . . . The teacher should know the content he is to teach as well as that of the disciplines from which his instructional subject matter may be taken. The first is necessary for teaching anything at all. The second supplies a depth of knowledge essential to the teacher's feeling of intellectual security and his ability to handle instructional content with greater understanding. . . .
>
> The failure of academic faculties to realize what they teach in the discipline-oriented courses is not the complete subject matter preparation of the teacher is one obstacle to the development of a more adequate program. Another obstacle is the failure of the pedagogical faculties to define their own role in the teacher's subject matter preparation. Perhaps the most serious result of these failures is the inadequate preparation of the teacher in the subject matter which he will actually teach. Often he cannot follow its roots very far into the disciplines or handle it skillfully in teaching. And he is frequently unable to see its significance in the life of his pupils. This situation is due to the fact that courses in the content of instruction have been taught either by academic instructors who have little knowledge of children, youths, and the curriculum of the public school, or by members of pedagogical departments who may know a great deal about children but little about the disciplines. (1969, p. 122)

For the beginning teacher, subject matter in the academic specialization should be considered in terms of (a) the content of the disciplines that contribute to the particular teaching field, (b) the content of instruction--that is, the subject matter judged appropriate for teaching to pupils, and (c) knowledge about knowledge--the elements of subject matter, its logical structure, uses, modes of inquiry, and ways in which information is manipulated and dependability determined. While the traditional dominance of the liberal

arts disciplines in higher education has supported a large role for the academic majors in teacher education programs, we need to reexamine this component as well as the pedagogical elements. Collaboration between colleges of education and the academic departments is necessary to facilitate efforts to learn what prospective teachers find most useful about their academic specialization courses (Epstein, 1973).

Field-Oriented Activities and Induction into the Profession

Teacher educators have long recognized that prospective teachers need a more graduated transition from their college studies to full status as classroom teachers. The provisions for job induction in teaching are meager and relatively unstructured compared to those of other professions, and even compared to those of the skilled trades. The person goes almost directly from being a student to being a teacher expected to perform the full professional role (Lortie, 1975, p. 59). A large part of the anxiety of beginning teachers can be attributed to this abrupt transition.

Student teaching has, of course, provided the future teacher with something of an induction to teaching, and most teachers consider it the most valuable and relevant part of their preparation to teach (Ryan et al., 1972). However, the limitations of student teaching are well known. It is often too brief and too narrow an exposure, and its quality depends too much on the situational specifics beyond the control of the training institution. Because cooperating teachers typically receive no reduction in workload, most of their influence on student teachers lies in presenting a model to be imitated. Student teachers enter the cooperating teacher's already established instructional situation and gradually merge with it; about the time they have some clear sense of personal deficiencies, problems, and unanswered questions, the experience is over. Thus, beginning teachers have been made aware of some problems, but alone face the task of solving them.

In many institutions, recent programmatic changes have provided a more appropriate background for the student teaching experience. In our institution, for example, planned field experiences providing observational and tutorial opportunities precede student teaching. Nearly every undergraduate course has a field component designed to supply examples of conceptual knowledge as reflected in the real world of the classroom.

Microteaching, Simulation, and Protocol Materials

In the past ten to fifteen years, teacher education has acquired some excellent instructional techniques to supplement field experience in bridging the gap between the college classroom and the public classroom--for example, microteaching, simulation techniques, and protocol materials.

Microteaching is a highly controlled, scaled-down teaching experience. The teacher conducts a short lesson with, usually, four or five students, in order to practice a specific teaching skill. The teacher receives immediate feedback (often with the assistance of a videotape recording of the lesson) and, ideally, attempts to improve that performance in a second teaching experience. Microteaching offers the prospective teacher a psychologically safe and manageable situation in which to concentrate on practicing specific teaching skills with continuous diagnostic feedback. The efficacy of

microteaching as an instructional technique has been well documented (e.g., Allen and Ryan, 1969; Allen and Eve, 1968; Bush, 1966; Borg, 1969).

Simulation is "the creation of realistic experiences to be played out by participants in order to provide them with lifelike problem-solving experiences related to their present or future work" (Cruickshank, 1968). For example, prospective teachers might be presented a written or filmed instance of a common, but critical, decision that teachers have to make; they would analyze the problem to identify relevant, irrelevant, and missing information; forces impinging on the problem situation; alternative and "best" courses of action for the teacher; and probable consequences. The efficacy of simulation in giving teacher education students a sense of being involved in realistic and beneficial activities also has been documented (Cruickshank, 1968).

Protocol materials are reproductions (such as print, film, audiotape) of behaviors that illustrate concepts of teaching and learning. Their primary purpose is to teach the prospective teacher to observe and interpret human behavior in terms of concepts appropriate to pedagogy (Gee and Berliner, 1974). For example, rather than simply learning about the concepts of positive reinforcement/negative reinforcement, the future teacher might view a film of a teacher approving and disapproving student behavior and the consequences such actions have for subsequent student behaviors. The use of the film, unlike field experience, guarantees that clear instances of the important concepts will occur, that the prospective teacher will see those instances and have attention directed to them, and that there will be time to think about and to analyze what has occurred--perhaps even time to see it again. Research indicates that well-designed protocol materials are highly effective in promoting acquisition of pedagogical concepts and that teacher education students view them favorably. Although protocol materials are not intended to modify teachers' classroom behavior directly, there is a little evidence that they may do so incidentally (Gliessman and Pugh, 1978).

These three techniques may be called "reality-based" education for teachers in that they bring real problems of classroom, school, and community to the teacher education classroom, yet the neophyte does not have to pay attention simultaneously to all the bewildering complexities of teaching. Unlike field experience, these techniques ensure that the future teacher will have a uniform and complete exposure to a range of experiences. However, they are expensive compared to the traditional textbook-lecture-written test format of undergraduate education that is the standard by which teacher education is funded. The extra expenses in materials--films, videotape equipment, specially prepared written materials--are obvious. Less obvious are the expenses in personnel and time. Having students actually learn, practice, and demonstrate a teaching skill through microteaching takes a much longer time and much more individual attention from the instructor than having them read about and respond to test items about the same skill. Observing contrasted examples of concepts takes longer than memorizing definitions of the same concepts. Applying knowledge by drawing up a concrete, detailed plan to individualize instruction for a hypothetical class of thirty students takes longer than simply acquiring the knowledge without applying it.

In sum, a teacher education program will require more time if it is (a) based on the realities of the classroom, (b) designed to ensure that graduates have actually demonstrated proficiency in specific skills before entering their classrooms, and (c) designed to make the transition to the classroom a gradual process. Unfortunately, a recent study of preservice teacher education (The State of Teacher Education 1977) indicated that microteaching and simulation are now being used much less as instructional techniques, probably

because they are expensive and declining enrollments have forced teacher education institutions to trim programs.

Beginning Teacher Needs

Incorporating early planned field experiences and reality-based instructional techniques in initial teacher preparation programs encourages reexamination of the role and nature of the student teaching experience. Early field experiences in conjunction with other professional courses, plus a year-long teaching internship, suggest shortening the student teaching experience, dividing that experience among several grade levels and/or community settings, and changing the placement of student teaching in the preservice curriculum.

Numerous studies of beginning teacher concerns emphasize their need for help on the job and their sense of isolation from the preparing institution. Accreditation visits by the National Council for Accreditation of Teacher Education disclose a common shortcoming among institutions: the lack of systematic follow-up for maintaining contact with recent graduates and for modifying programs in light of beginning teacher needs.

We propose that a full-year paid internship be added to five years of initial teacher preparation to permit the development of both pedagogical skills in applying conceptual knowledge and a sound conceptual knowledge base. We further recommend that during the first year of full-time regular teaching following the internship, school systems and colleges and universities join in providing assistance to new teachers on a systematic basis.

With Smith and Orlosky, we believe the preservice preparation program does not qualify a graduate for admission to full status as a teacher, but rather for an internship in the schools. The preservice program must necessarily be generic; however, the test of this preparation lies in the individual's capacity to apply generic learning in specific community and school settings and with particular children. Developing such application skills and evaluating the candidates' ability to apply them effectively are the major functions of the induction/internship year. The public schools have a major role in accepting the products of campus-based teacher education programs as interns and sharing responsibility for developing them into competent beginning teachers.

We concur with Smith and Orlosky that, after graduation from the university, interns should be residents in training and that certification as teachers should be contingent upon successful completion of an internship and on the recommendation of the authorities under whom the internship was served. Until then, individuals should be certified only as interns on the recommendation of the preparing institution (Smith and Orlosky, 1975, p. 172).

Thomas Ryan's discussion of a clinical year compresses the internship and follow-up supervision into the beginning year of full-time employment. Ryan holds that:

> Employment carries with it the responsibility to apply knowledge and skills to perform a particular role in a specific setting. Thus the transition from participant in a preparation program to employment as a teacher is often accompanied by difficulties of adjustment. Traditionally these difficulties are recognized by the imposition of a probationary period of three years prior to the award of tenure and continuing certification. The system assumes the need for special support

during the transition period, but support is often inadequate. There is a clear and pressing need to provide organized support for newly employed teachers.

Thus, a clinical year is proposed during which first-year teachers attempting to apply knowledge and skill in a specific role in a specific setting would receive systematic support. This role-specific support would be provided through a coordinated effort involving local education agencies, institutions of higher education, and the State Department of Education. (1979, p. 4)

Follow-up of Recent Graduates

The importance of assistance to new teachers was emphasized in recent testimony before the Congress. Pat Weiler, director of the Teacher Center Resource Exchange, American Federation of Teachers, proposed that a new section be added to Teacher Corps legislation to provide funds for support for beginning teachers. The funds would be used for released time for consultation, work with experienced teachers in the teacher center, and observation in classrooms managed by successful teachers (Weiler, 1979).

We would also recommend calling for financial support to higher education institutions to permit continuing supervision and consultation with beginning teachers. Federal funding has long supported such opportunities in vocational education. At the University of Kentucky, for example, workloads of teacher educators in vocational education permit them to spend full days in the classroom of recent graduates as well as to offer coursework after the regular school day in field locations convenient to groups of graduates.

At the University of Kentucky, we have developed another mechanism for follow-up of first-year teachers in special education:

> Fifty-seven students . . . received from their student teaching supervisor a blank cassette tape that carried these instructions, "This is an S.O.S. tape. I'll tape an answer and send it back to you." Graduates who were near enough to do so were also invited to make a telephone call or to come in and talk with their former supervisor if they needed assistance. Those who were teaching in other states were invited to write for help if they preferred not to use their tapes.
>
> Of the sixty-four follow-up contacts that were made, twelve were the S.O.S. audio cassettes. Questions raised were analyzed by the professor and a response was recorded on another cassette and mailed back to the teacher. Every effort was made to make the response practical and specific. The response emphasized helping the teacher recall concepts that were taught and apply them to on-the-job situations. Each S.O.S problem was a specific instance of a general rule. (Morsink, Blackhurst, and Williams, 1979).

Relationship with Inservice Education and Continuing Professional Development

We should make it clear that we are not proposing to replace inservice education and continuing professional development with a longer initial preparation program. Rather, we advocate removing remedial content from them and thereby freeing them for their legitimate purposes.

Although many educators use the terms "inservice education" and "continuing professional development" interchangeably, we differentiate between them to support a concept of career-long teacher education that responds to needs of the individual teacher, of employing school districts, and of the teaching profession. With Smith and Orlosky (1975, p. 180), we view inservice education as "any training of school personnel to prepare them to satisfy a need of the school system. The skills and concepts comprising the substance of the training program are determined by deficiencies in the instructional administrative and support services of the school. [Continuing professional development,] in contrast, consists of experiences and studies to satisfy the personal needs of the school personnel. Its character is determined not by the deficiencies of the system, but by the interest of each individual in his own personal and professional development and career advancement." Thus, continuing professional development serves the professional teacher-scholar, who possesses a high level of teaching proficiency; the ability to supervise and coordinate the activities of professional and paraprofessional associates; and the ability to assume leadership roles in school, community, and profession (Howsam, et al., 1976, p. 103).

Issues Arising from Confusion of Functions

Some important issues in teacher education result from a confusion of the objectives for preservice education, inservice education, and continuing professional development. Because preservice programs have not accepted the goal of developing professional competencies in teacher candidates to a level of professional practice that guarantees the safety of the pupil/client, we have diverted inservice education from its proper concentration on helping teachers respond to particular needs of their employing school system and are trying to use it to correct deficiencies in their preservice preparation.

Many colleges and universities, pressured by declining enrollments and budgetary limitations, have neglected their major responsibilities--the initial preparation and continuing professional development of teachers--by approving for graduate degrees a collection of situation-specific inservice education experiences. As Arnold et al. (1977, p. 55) pointed out:

> School systems should not expect formal graduate degree programs to substitute for their own critical assessment of faculty competencies for tenure and salary decisions; neither should institutions of higher education or teacher organizations assume that employer-based programs of inservice education can meet the broad obligations of career development for teachers. Confusing the particular functions of preservice preparation, inservice education, and continuing professional development can only weaken the effectiveness of each.

If we can design and implement a comprehensive system of teacher education with properly delineated responsibilities for preservice preparation, inservice

education, and continuing professional development, we can assure a safe level of beginning competence; improve the responsiveness of the teaching staff to school system needs; and recognize and support the career-long personal and professional interests of individual teachers.

A Complex Task

Our discussion has emphasized the need to expand the time and resources allotted to initial teacher preparation and a possible framework for the curricular elements of external programs. We do not imagine that our proposed six-year program could be implemented easily or in one step; nor that increased time alone will be sufficient to place teacher education on a fully professional basis. Rather, we believe the practitioner's need for safe practice with clients is the beginning point for all decisions about preparation programs--including time and curriculum.

Before considering the context of extended preparation programs, teacher education institutions must consider whether to eliminate or compress any content in present programs. They must weed out obsolete content; they must distinguish the necessary reiteration of concepts for expansion, refinement, and application from the unnecessary duplications. Material appropriate to all programs must be located in core courses; whenever possible, material appropriate to several programs should be included in common courses or taught through schedule-blocking, self-instruction, or other efficient methods.

An extended program should not simply allot more time to do the same job, or tack a body of miscellany onto an existing four-year program. Rather, all components should comprise a logical, effective sequence; and the program or any part of it should be discarded if ineffective.

Other Elements Influencing the Quality of Teacher Preparation

The content and structure of initial teacher education programs, while central to the preparation of competent professionals, are just two elements in a complex system. Among other elements that interact are:

1. Selection and admission criteria for teacher education (Arnold et al., 1977)
2. Performance standards for students in teacher education programs and for graduation from those programs (Arnold et al., 1977)
3. Preparation and experience qualifications of the teacher education faculty
4. The reward system within the higher education institution
5. The readiness of area school systems to cooperate in the field components of the program
6. Education legislation and certification policies.

ISSUES RELATING TO EXTENDING INITIAL TEACHER PREPARATION

Four-year programs of teacher education do not now prepare graduates adequately to begin the practice of teaching. However, we believe that the current knowledge base will permit significant improvement--provided adequate time and resources are made available for the task. Assuming agreement with our position, many questions remain to be considered and resolved, as follows:

1. Should teacher education become a graduate-level program, with admission coming only after successful completion of a baccalaureate program that includes certain specified pre-education courses in the undergirding disciplines? Does intermixing general/liberal education and the professional studies benefit or detract from either?

2. Does the complexity of the task and the need for ensuring an appropriate level of safe practice require five years of preparation? Five years plus an internship? Six years plus an internship? Some other pattern?

3. What impact would extending initial programs of teacher preparation have on minority and low-income students? Would the added personal expense to teacher candidates (in actual costs of extended schooling and in deferment of full-employment salaries) reduce the numbers of minority and poor entering teaching at a time when we have been attempting to expand their involvement?

4. How much variation in the content and structure of initial teacher preparation is desirable?

5. What is the most appropriate blend of campus-based and field-based experience in initial preparation? What role should microteaching and simulation experiences have in the process?

6. Can the proposed substantial expansion of the field component be funded within the framework of higher education budgets, or will it be necessary to develop state-supported funding for school systems that assume significant roles in teacher preparation?

7. How important is it that the teacher education unit be viewed as a professional school rather than an academic department or college? Should a professional degree (comparable to the M.D. or J.D.) rather than the present academic degree be awarded at the conclusion of initial preparation?

8. Does the proposal to extend initial teacher preparation threaten the continued participation of liberal arts colleges in teacher education? Does it imply new kinds of collaborative relationships among institutions? Is it realistic to expect public and private institutions to coordinate program components with other institutions?

9. What changes in teacher certification are implied by extensions of initial preparation? Does the assumption that initial preparation should bring teachers to a fully professional level reduce or

eliminate the case for provisional certification or for periodic certificate renewal? What role should teaching colleagues play in certificate extension or renewal?

10. Would the extension of initial teacher preparation and the consequent need for substantial enhancement of teacher salaries renew the interest in differentiated staffing and the need for training programs for aides or paraprofessionals?

11. What use should be made of competency tests for teachers? Should extended preparation programs be assessed partly or wholly by competency tests developed outside of the preparing institution? What qualifications predictive of successful teaching should candidates for admission to teacher education display? What distinguishes these traits from those assumed to be training objectives of the initial preparation program?

12. What system of governance is appropriate to such an extended program of initial preparation and to the related roles for inservice education and continuing professional development?

CONCLUSION

Teachers need to know, to do, and to be. They need conceptual knowledge to explain the relationships between events, actions, and things; but beyond "knowing about," teachers need to "know how." Both are necessary to effective teaching. An appropriate blend of knowing the principles underlying good teaching and possessing the skills for implementing those principles is essential. But "knowing how" is in turn subject to the qualification "how well?" "Knowing how to do something is one thing, knowing how to do it well is . . . another, and doing it brilliantly is still a third" (Scheffler, 1965, pp. 95-96). Our training programs must enable all teachers to "do it well" while encouraging many teachers to "do it brilliantly."

Beyond the demands of knowledge and skill is the ultimate expectation that teachers become models or mentors for those they instruct. They must exemplify in their behavior the qualities they seek to engender in others. This expectation is nowhere more legitimate than in the process of teacher preparation.

Preparing competent professionals to begin practice demands time and resources well beyond those now available. For this reason we urge the profession to design and implement an extended program of initial preparation so that further training to overcome deficits is not an inevitable and immediate obligation of beginning teachers. Although five years of campus-based, field-oriented preparation followed by a year of supervised internship will be expensive in time and other resources, we stress that the societal and individual costs of failing to provide high-quality teacher preparation are far greater.

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